in which R¹, R² and R³ independently of each other are linear or branched hydrocarbon residues with 1 to 22 carbon atoms and/or said R¹, R² and R³ comprises full or part cyclic structures and/or contain heteroatoms selected from the group consisting of nitrogen, oxygen and/or sulfur.

- 16. (new) The process according to claim 15, wherein at least one of said R¹, R², R³, independently of each other, is ethyl, n-propyl, isopropyl, n-butyl, isobutyl or tertiary butyl.
- 17. (new) The process according to claim 15, wherein said amine oxide comprises at least one of said residue linked to the nitrogen atom having a β -hydrogen atom.
- 18. (new) The process according to claim 14, wherein the amine oxide is selected from the group consisting of triethylamine-N-oxide, N-ethylmorpholine-N-oxide, N-methylmorpholine-N-oxide, diethyloctylamine-N-oxide, dimethylcyclohexylamine-N-oxide, ethyldicyclohexyl-amine-N-oxide, N,N,N',N'-tetra-ethyl-bisaminoethyl ether-di-N,N'-oxide, diethylcyclo-hexylamine-N-oxide and diethylpiperzine-N-oxide.



- 19. (new) The process according to claim 14, wherein the amine oxide is used at 0.01 to 5 % by weight based on the weight of compounds with reactive hydrogen atoms used.
- 20. (new) The process according to claim 14, wherein said compound containing at least two reactive hydrogen atoms comprises a polyether with at least two free hydroxy groups.
- 21. (new) The process according to claim 14, further comprising employing metal salts of organic compounds as catalysts.
- 22. (new) The process according to claim 14, wherein beside the amine-N-oxide catalysts no tertiary amine catalysts are used.
- 23. (new) The process according to claim 14, wherein besides the amine-N-oxides no further polyurethane/polyurea catalysts are used.
- 24. (new) The process according to claim 14, wherein during the course of the reaction a reaction temperature of 50 °C is exceeded.

- 25. (new) The process according to claim 14, wherein during the course of the reaction a reaction temperature of 130°C is exceeded.
- 26. (new) The process according to claim 14, further comprising adding one or more surfactants as foam stabilizers to the reaction mixture.
- 27. (new) The process according to claim 26, wherein the foam stabilizers is a silicone.

B² (Under

- 28. (new) Use of an amine-N-oxide or a compound comprising at least one amine-N-oxide group as a catalyst for manufacturing polyurethane polymers by reacting compounds containing at least two isocyanate groups with compounds containing at least two reactive hydrogen atoms and wherein the amine oxide comprises at least one residue linked to the nitrogen atom having a β -hydrogen atom and the reaction temperature during the course of the reaction exceeds a temperatures of 50 °C.
- 29. (new) Use according to claim 28, wherein the reaction temperature during the course of the reaction exceeds a temperature of 130°C.--